

Global Studies 201

University of Wisconsin-Milwaukee
Fall 2007

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Environmental economics studies the intersection of the social and physical sciences. Social sciences study how individuals and societies interact. In particular, Economics is the study of how societies allocate scarce resources. The physical sciences define relevant resource constraints for each particular issue. Environmental problems such as climate change, tropical deforestation and pollution all fit this description. The contribution of economists is environmental policy. The focus of this course is international environmental issues. The first half of course covers theory and methods, the second half topics and applications. This course material is divided into six parts, outlined below.

Course Requirements:

The required texts are:

- (i) *Environmental Economics and Management: Theory, Policy, and Applications* by Scott Callan and Janet Thomas, 3rd edition (ISBN: 0-324-17181-1).
- (ii) *The Economics of Public Issues* by Miller, Benjamin and North, 14th edition. (ISBN: 0-321-03049-0).

The texts are available at the bookstore in the Union. Both required texts are available through 2-hour reserve at the library. Other required readings, listed below, are available through e-reserve. Barrett, S. (2003) *Environment and Statecraft* is optional. Those of you particularly interested in International Environmental Agreements (IEAs) may want to purchase the Barrett book.

This course meets Tuesday and Thursday from 12:30-1:45 in Bolton B60 beginning Tuesday, September 4th and ending Tuesday, December 11th. There is no class on Thanksgiving, Thursday, November 22nd.

There will be two exams, a midterm and a final. The final is not explicitly comprehensive. The midterm will be on Thursday, October 18th, and will cover topics I-III in the outline below. The final is from 12:30-2:30 on Monday, December 17th. The final will cover the remainder of the material, topics IV-VI. Both exams will be held in Bolton B60. The exams will be a combination of multiple choice, short answer and numerical problems.

The problems will cover the material from the lectures and the text. Their purpose is to prepare you for the exams so they will emphasize short answers, problem solving and explaining the important topics. Problem sets will count 10% of your grade. Classroom participation and attendance will count 10%. Each exam will count 40%.

The material builds upon itself, so keeping up to date with the readings and lectures is very important. Typically, lectures will extend the results from the previous class. Missing lectures will greatly enhance the difficulty of the course. If there are concepts that you find confusing, please ask for help in office hours.

Office Hours:

My regular office hours are Tuesday and Thursday from 11:00-12:00 in 862 Bolton. I am available for appointments if you can't make these times. Please use my office hours if you need help.

Math:

We will be using some basic algebra to solve problems in lecture and the problem sets. I will review some of the math we will be using as needed. Examples include dividing fractions, calculating percentage changes, computing the area of a triangle, and solving two equations with two unknown variables.

Policies and Procedures:

Please read the University's policies at: <http://www.uwm.edu/Dept/SecU/SyllabusLinks.pdf>.

Information on academic misconduct can be found at:

http://www.uwm.edu/Dept/Acad_Aff/policy/academicmisconduct.html

Accommodations will be made for students with disabilities and observance of religious holidays. The University's calendar is at: http://www.uwm.edu/Dept/Acad_Aff/policy/. Please inform me of this need as soon as possible so that we can make the appropriate arrangements. According to University regulations, students may drop the course until the end of the 8th week of classes.

Please turn off all cell phones before lecture.

Course Outline:

I. Introduction

Materials balance model
Laws of thermodynamics
Pollution
Environmental valuation and measurement

Readings: chapter 1 Callan and Thomas

II. Markets

Demand, supply and equilibrium
Welfare and efficiency
Market failures: Public goods, common resources, and externalities
Property rights and the Coase Theorem

Readings: chapters 2, 3 Callan and Thomas

The Economics of Public Issues, Miller, et al., chapters 7, 20, 24

- III. Economic Policy
Command and control
Allocative efficiency
Pollution taxes
Abatement subsidies
Systems of tradable pollution permits

Readings: chapters 4, 5 Callan and Thomas

Midterm Exam, Thursday, October 18th

Topics

- IV. Ozone, Greenhouse gases and the Kyoto Protocol

Readings: chapter 13 Callan and Thomas

McKibbin, W. and Wilcoxin, P. (2005) "The Role of Economics in Climate Change Policy," in Stavins, R. ed. *Economics of the Environment*, 5th edition, pp 479-502.

Barrett, S. (1994). "Self-Enforcing International Environmental Agreements." *Oxford Economic Papers*, 46 (878-94).

(Optional) Barrett, S. (2003) *Environment and Statecraft*, chapters 1-4, 6, 8, 14-15.

UNFCCC report 2007: <http://www.ipcc.ch/SPM2feb07.pdf>

- V. Trade and the environment

Readings: chapter 20 Callan and Thomas

Frankel, J. (2005). "The Environment and Globalization." in Stavins, R. ed. *Economics of the Environment*, 5th edition, pp 361-398.

The Economics of Public Issues, Miller, et al., chapters 29-31.

- VI. Sustainable development

Readings: chapter 21 Callan and Thomas

Solow, R. (2005). "Sustainability, an Economist's Perspective," in Stavins, R. ed. *Economics of the Environment*, 5th edition, pp 502-513.